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Snow Surveys and Water Supply Forecasts

Montana and Northern Wyoming
Upper Missouri,
Upper Columbia and
Yellowstone Rivers

SOIL CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AND MONTANA AGRICULTURAL EXPERIMENT STATION

In cooperation with the U.S. Forest Service, U.S. Geological Survey, National Park Service, U.S. Bureau of Reclamation, State Engineers of Montana and Wyoming and other Federal, State and local Organizations. AS OF _

APRIL 1, 1955

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY AND WATER SUPPLY FORECAST REPORTS.

Forecasts by U. S. Weather Bureau of total annual streamflow October-September, inclusive, at more than 300 gaging stations are issued monthly January through May in the publication WATER SUPPLY FORECASTS FOR THE WESTERN UNITED STATES.

Weather Bureau forecasts of runoff presented in that bulletin are computed from procedures based on mathematical analysis of the relation between precipitation and runoff.

The Weather Bureau bulletins may be secured by writing to:

Hydrologist in Charge River Forecast Center U. S. Weather Bureau 712 Federal Office Building Kansas City 6, Missouri

For current information on local river and flood conditions, reference should be made to the appropriate River District Office, listed below:

Meteorologist in Charge........Missouri River and
Weather Bureau Office tributaries above
Box 1705 Fort Peck Dam; Milk
Helena, Mont. River

Meteorologist in Charge.......Yellowstone River Weather Bureau Airport Station and tributaries. Box 1338
Billings, Mont.

State of Montana

FEDERAL - STATE COOPERATIVE

SNOW SURVEYS and WATER SUPPLY FORECASTS

for
MONTANA AND NORTHERN WYOMING
(Upper Missouri and Upper Columbia River Basins)

Report Prepared by:

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and

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M. M. Kelso, Director Montana Agricultural Experiment Station



WATER SUPPLY OUTLOOK FOR 1955 SEASON APRIL 1, 1955

A fair water supply outlook now exists over the Missouri * and Columbia River Basins in Montana. The several good storms * which covered the State during March produced sufficient mois-* ture to raise the potential water supply to almost normal in * * many basins and slightly below in others. * The terrific snow storm from April 1 through April 6 ÷,e * brought a record high snowfall to many sections of the State * and left others completely bare. This spotted condition of * the storm has made it difficult to evaluate in the terms of * * seasonal or early runoff. No doubt there will be local flood--1/-* ing in some areas, but the general condition from a seasonal * runoff standpoint is not serious. There is no doubt that the * storm will be of immense value to the dry_land farmers through- * * out the eastern part of the State where precipitation has been * lacking during the fall and previous winter months. 35 Reservoir storage in the northern part of the State is * above average, while on April 1 reservoir storage in the south- * * ern and central part of the State was somewhat below average.

JEFFERSON RIVER:

The snow-pack over the Beaverhead-Jefferson River Basin has increased slightly during the month of March. Their seasonal stream-flow forecasts have been raised to approximately 70 per cent of average. The April 1-6 storm was comparatively light in the Beaverhead-Jefferson valley. At Lima, 0.1 inches of water was recorded; at Dillon 1.06 inches; at Virginia City 1.01 inches during the five days. It is believed that this snowfall will be of considerable benefit to dry land ranches and stockmen.

MADISON RIVER:

The April 1 snow-pack over the Madison Basin has increased to approximately 80 per cent of the usual amount expected on that date. The April-September flow for the Madison River at West Yellowstone is anticipated to reach 81 per cent average or 181,000 acre feet. The April 1-6 storm brought considerable moisture to the mid-portion of the basin but deposited only a small amount in the large vicinity of Hebgen Lake and West Yellowstone.



GALLATIN RIVER:

The snow-pack over the Gallatin River has increased over the amount reported in March to the extent that the high snow is very close to the average figure. The water content on April 1 was 97 per cent last year, 104 per cent of the year before, and 97 per cent of average of the past 18 years record. The April 1-6 snowstorm brought a considerable amount of moisture to the eastern portions of the Gallatin valley to very slight amounts in the western portions of the valley. At Bozeman, 3.25 inches of moisture was recorded with only a few hundredths of precipitation at Manhattan. Due to the late accumulation of snow, it is anticipated that the spring runoff will be early and there will not be a prolonged runoff season. The percentages of normal snow cover on the Gallatin and Madison Basins are higher than other tributaries to the Missouri River.

YELLOWSTONE RIVER:

Snow surveys conducted by the Yellowstone Park Rangers in the upper portions of the basin show considerable increase toward a normal condition in the 1955 snow-pack. At the present time, the average of 9 snow survey courses shows that this year is 76 per cent of last year, 92 per cent of the year before, and 92 per cent of the long-time average in the Park. The Yellowstone River at Corwin Springs will probably flow in the neighborhood of 1,714,000 acre feet during the April-July period or 85 per cent average. The April 1-6 storm brought a tremendous amount of snow to the Yellowstone valley with 4.00 inches of water content at Billings and 3.57 at Hardin. This would mean that dry-land farmers will benefit considerably from this storm. However, the mountain ranges did not receive anywhere near their portion of the storm. The over-all seasonal forecast for the Clark Fork River at Chance and Edgar is 84 per cent of average, while the Yellowstone River at Billings is expected to flow 87 per cent average. There will, no doubt, be local flooding of fast-melting snow in the valley areas. However, the high mountain snow will not appear in the streams for several weeks.

MISSOURI MAIN STEM:

The 1955 snow-pack in the tributary streams to the Missouri from Toston to Fort Benton is about 6 per cent below the usual amount. Portions of the Big Belt Mountains received considerable snow during the April 1-6 storm. However, the valley stations are reporting a greater amount with mountain stations reporting a smaller per cent for the 5-day storm. All forecasts have been revised upward from those issued March first. It is anticipated that the Missouri River at Toston will flow 76 per cent of average during the April-September period, or 1,904,000 acre feet. At Fort Benton, the River should flow about 78 per cent of average with Fort Peck Reservoir receiving approximately 3,756,000 acre feet of water during the April-September period and 3,254,000 acre feet during the April-July period.



SUN RIVER:

April 1 snow surveys indicated that the Sun River Basin snow-pack this season is only 59 per cent of last year; 115 per cent of the year before and 84 per cent of the usual amount. This would indicate that the potential storage for Gibson Dam will be considerably less than last year, about half. The flow into Gibson Dam should be approximately 20 per cent below the average. Due to the late season's snow-pack, it is anticipated that the runoff will be earlier than usual this season.

COLUMBIA BASIN

FLATHEAD RIVER:

April 1 snow surveys at 21 snow survey courses over the Flathead Basin above Polson, indicate that the April 1, 1955 snow-pack is 72 per cent of last year; 100 per cent of the year before and 86 per cent of the usual occurrence. The April 1-6 snowstorm, which caused so much trouble east of the Continental Divide, did not add materially to the snow-pack on the Columbia Basin. The stream-flow forecasts issued on the first of March have been revised upward to approximately 82 to 85 per cent. The forecasted flow into Hungry Horse Dam is 1,850,000 acre feet of water during the April-July and April-June runoff periods are shown in the tables following this writeup for the various points along the Flathead and Clark Fork Rivers.

CLARK FORK RIVER:

The 1955 snow-pack over the Clark Fork Basin on April 1 has increased materially during March. The present snow-pack is 81 per cent of last year, 93 per cent of the year before, and 95 per cent of average. The Bitterroot Basins seem to have a little bit higher per cent of snow-pack but stream-flow forecasts are down in comparison. The Blackfoot Basin has a 70 per cent average snow-pack this season. It is anticipated that the flow of the Clark Fork River above Missoula will be 71 per cent average during the April-September period or 1,317,000 acre feet.



IDDED MEGOMES STORE			m-Flow in T	nousands	oi Acre	
UPPER MISSOURI RIVER	FORECAST	%	FORE	75.	D 0.0v	10-Yr.
IN MONTANA	RUNOFF	10-Yr	CAST		Runoff*	Avg.
		Avg.	PERIOD	1953	1952	1943-52
					l.	
RED ROCK RIVER						
Monida (near) (1)	72	80	Apr-Sept	72	126_	89
	67	77	Apr-July	72	124	88
Kennedy Ranch (at)	62	68	Apr-Sept	72	126	92
BEAVERHEAD RIVER						
Barratts (at)	133	65	Apr-Sept	170	222	204
	111	66	Apr-July	130	169	154
BIG HOLE RIVER						
Melrose (near)	649	80	Apr-Sept	745	808	811
·	600	80	Apr-July	699	761	748
JEFFERSON RIVER						
Sappington (at)	849	73	Apr-Sept	1006	1135	1160
	754	73 74	Apr-July	921	1025	1025
ADISON RIVER						
West Yellowstone (near)	181	84	Apr-Sept	207	248	216
	130	84	Apr-July	158	192	165
Grayling (near) (2)	382	84	Apr-Sept	434	563	457
	302	83	Apr-July	347	458	363
McAllister (near) (3)	671	86	Apr-Sept	718	961	782
	541	85	Apr-July	577	796	633
GALLATIN RIVER						
Gateway (near)	397	82	Apr-Sept	404	596	485
	342	83	Apr-July	345	524	413
Logan (at)	396	75	Apr-Sept	442	745	528
	339	75	Apr-July	379	665	1452
MISSOURI RIVER		_		1		
Toston (at) (3)	1904	76	Apr-Sept	2139	2895	2517
	1611	74	Apr-July		2554	2165
Fort Benton (at) (4)	2956	78	Apr-Sept	3726	3912	3767
	2492	78	Apr-July	3259	3382	3205
Loma (at) (4)	3605	79	Apr-Sept	5035	4562	4551
	3077	78	Apr-July	4515	3996	3919
Zortman (near) (4)	3873	78	Apr-Sept	5886	5116	4939
	3296	78	Apr-July	5298	4440	4229
Ft. Peck Dam(below)(5)		77	Apr-Sept	5798	5223	4878
, , , , ,	3254	76	Apr-July	5353	4658	4267

⁽¹⁾ Observed flow plus change in storage in Lima Reservoir (2) Observed flow plus change in storage in Hebgen Lake

⁽³⁾ Observed flow plus change in storage in Hebgen and Ennis Lakes

⁽⁴⁾ Observed flow plus change in storage in Canyon Ferry

⁽⁵⁾ Observed flow plus change in storage in Canyon Ferry and Ft. Peck Reservoirs

^(*) Preliminary data furnished by U. S. Geological Survey, subject to correction



PPER MISSOURI RIVER		1	n-Flow in Th	loabanab 0	I MOIO FE	
IN MONTANA	FORECAST	%	FORE-			10-Yr.
	RUNOFF	lo-Yr	CAST	Measured		Avg.
		Avg.	PERIOD	1953	1952	1943-52
SUN RIVER	250	0.0		5 00	27.0	1 40
Vaughn (near) (6)	379	83	Apr-Sept	790	312	458
(ADT. G. D. T. 1990)	324	75	Apr-July	745	284	431
IARIAS RIVER	۲۱.۵	04		0.01	156	100
Shelby (near)	542	85	Apr-Sept	934	476	635
D. (a)	1,98	86	Apr-July	871	1,35	582
Brinkman (near)	552	86	Apr-Sept	1025	534	641
TIM TIME IN THE PROPERTY OF THE PARTY OF THE	508	86	Apr-July	963	491	587
UDITH RIVER	27.0	60		20		1.0
Utica (near)	31.3	68	Apr-Sept	38	47	46
TICATI CUITT I DOMINI	28.7	68	Apr-July	36	45	42
USSELSHELL RIVER	-1			_,		
Harlowton (at)	74	75	Apr-Sept	74	118	99
	69	76	Apr-July	66	109	91
Mosby (at)	132	74	Apr-Sept	124	172	178
	124	74	Apr-July	119	166	168_
ELLOWSTONE RIVER						
Corwin Springs (at)	1714	85	Apr-Sept	1649	2171	2012
	1430	86	Apr-July	1366	1867	_1669
Livingston (near)	1975	85	Apr-Sept	1820	2417	2315
	1631	85	Apr-July	1496	2062	1908
Billings (at)	3837	87	Apr-Sept	3367	4642	4403
	3295	88	Apr-July	2854	4046	3758
Miles City (at)	6157	88	Apr-Sept	4648	6265	6997
	5289	88	Apr-July	3905	5341	5954
Sidney (near)	6269	86	Apr-Sept	4716	6857	7290
	5432	86	Apr-July	4053	6034	6297
HIELDS RIVER						
Wilsall (near)	42	.93	Apr-Sept	61	50	45
	39	93	Apr-July	58	48	43
Clyde Park (at)	110	90	Apr-Sept	130	162	122
	102	90	Apr-July	122	154	113
LARK FORK RIVER						
Chance (at)	527	84	Apr-Sept	519	576	629
	472	85	Apr-July	469	517	557
Edgar (at)	558	84	Apr-Sept		613	665
, i	493	85	Apr-July	528 467	538	581
Hyalite Cr. R.S. (at) (7)	35.5	93	Apr-Sept	33	41	38
	30.3	95	Apr-July	29	34	32

⁽⁶⁾ Observed flow plus change in storage in Gibson, Willow Crk and Pishkin Res. (7) Observed flow plus change in storage in Hyalite Reservoir (*) Preliminary data furnished by U. S. Geological Survey, subject to correction



Seasonal Stream-Flow in Thousands of Acre Feet											
MISSOURI RIVER BASIN +	FORECAST	%	FORE-		ì	10-Yr.					
YELLOWSTONE RIVER TRIB-	RUNOFF	10-Yr.	CAST	Measured		Avg.					
UTARIES IN WYOMING		Avg.	PERIOD	1953	1952	1943-52					
WIND RIVER					1	ب _ ب					
Riverton (at) (8)			Apr-Sept	291	374	575					
BIG HORN RIVER	. (1-	(0		(20	000	1050					
Boysen Dam (below) (9		60	Apr-Sept	618	889	1079					
Kane (at)	820	54	Apr-Sept	804	1282	1518					
St. Xavier (near (10)	1290	52	Apr-Sept	984	1286	2104					
BULL LAKE CREEK	21.6	70	A C	7,40	202	200					
Lenor (near)	145	72	Apr-Sept	159	203	200					
POPO AGIE RIVER	280	70	Ann Cont	218	450	1100					
Riverton (near)	200	10	Apr-Sept	210	450	400					
GREYBULL RIVER Meeteetse (at)	142	61	Ann Cont	157	278	233					
	142	35	Apr-Sept	37	173	116					
Basin (near) SHOSHONE RIVER	117	32	Apr-Sept	31_	112	110					
Buffalo Bill Dam (be)	(72) 560	70	Apr-Sept	582	697	802					
Byron (at) (12)	340	50	Apr-Sept	356	486	628					
TONGUE RIVER	340	- 50	Whi-Rebo	350	400	020					
Dayton (near)			Ann Sont	96	104	115					
Acme (near)			Apr-Sept	200	239	274					
Decker (near)Montana(121		Apr-Sept	200	249	283					
POWDER RIVER	13)		Apr-Sept		249	203					
Arvado (at)			Apr-Sept	76	125	143					
Moorehead (at) Montan	ລ		Apr-Sept	154	235	285					
Locate (at) Montana	<u>a</u>		Apr-Sept	208	303	361					
MIDDLE FORK POWDER RIVE	R		Apr -bcp0	200	707	JOI					
Kaycee (near)	16		Apr-Sept	27	36	69					
NORTH FORK POWDER RIVER			The pepe	21	50						
Mayoworth (near)			Apr-Sept	14	17	20					
CLEAR CREEK			1101 2000								
Buffalo (near)			Apr-Sept	27	35	40					
Arvado (near)			Apr-Sept	72	100	126					
			**!-	1-							

^(8) Observed flow plus storage in Bull Lake and Pilot Butte Reservoirs (9) Observed flow plus storage in Boysen Reservoir (10) Observed flow plus storage in Boysen and Buffalo Bill Reservoirs

⁽¹¹⁾ Observed flow plus storage in Bull Lake Reservoir (12) Observed flow plus storage in Buffalo Bill Reservoir

⁽¹³⁾ Observed flow plus storage in Tongue Reservoir

^(*) Preliminary data furnished by U. S. Geological Survey, subject to revision



IDDED GOTTEDTA DITTED	Season	nal Strea	m-Flow in T	housands (of Acre F	eet
JPPER COLUMBIA RIVER IN MONTANA	FORECAST	%	FORE-			10-Yr.
	RUNOFF	lo-Yr	CAST	Measured	Runoff*	Avg.
		Avg.	PERIOD	1953	1952	1943-52
CLARK FORK RIVER			1			
Bonner (above) (14)	671	78	Apr-Sept	808	833	853
	591	78	Apr-July	718	749	751
	508	78	Apr-June	619	673	644
Missoula (above)	1317	71	Apr-Sept	1887	1782	1841
	1178	71	Apr-July	1695	1619	1644
	1025	72	Apr-June	1435	1468	1417
Missoula (below)	2570	75	Apr-Sept	3158	3268	3392
	2343	76	Apr-July	2879	3011	3080
	2050	77	Apr-June	2370	2722	2652
St. Regis (at)	3464	76	Apr-Sept	4071	4338	4524
	3142	76	Apr-July	3701	3972	4110
	2717	80	Apr-June	3054	3572	3399
Plains (near) (15)	9693	80	Apr-Sept	11880	11550	12117
(/ (/	8700	78	Apr-July	10950	10740	11096
	7242	76	Apr-June	9062	9641	9502
Cabinet Gorge (at)(15)		81	Apr-Sept	13002	12554	13557
343211 Gorge (43)(2)	9984	81	Apr-July	11767	11613	12388
	8472	80	Apr-June	9720	10336	10584
BLACKFOOT RIVER					,	
Bonner (near)	646	65	Apr-Sept	1078	949	988
` '	582	65	Apr-July	977	869	893
	502	65	Apr-June	816	795	773
SITTERROOT RIVER						
Darby (near)	502	84	Apr-Sept	557	608	593
bar of (noar)	465	84	Apr-July	533	567	551
	409	84	Apr-June	430	517	484
At Mouth (16)	1252	81	Apr-Sept	1271	1486	1524
At House (10)	1168	81	Apr-July	1184	1392	1437
	1031	83	Apr-June	935	1254	1235
CLATHEAD RIVER N. Fk.		05	ADI -0 une	7.)	1254	
Columbia Falls (near)	1638	88	Apr-Sept	2049	1745	1850
Oording tarts (Heat.)	1495	88	Apr-Sept	1875	1605	1682
	1285	89	Apr-June	1540	1415	1434
Columbia Falls (at)(17				6523		6111
COTUMDIA FALIS (at)(I/		84	Apr-Sept		5733	
	4802	84	Apr-July	6075	5362	5665
Dell () (25)	4209	86	Apr-June	5043	4804	4880
Polson (near) (15)	5977	83	Apr-Sept	7565	7029	7193
	5354	79	Apr-July	7081	6615	6770
	4276	74	Apr-June	5880	5930	5798

⁽¹⁴⁾ Difference in observed flow, Clark Fork above Missoula & Blackfoot at Bonner (15) Observed flow plus change in storage in Flathead Lake & Hungry Horse Res. (16) Difference in observed flow, Clark Fork above and below Missoula (17) Observed flow plus change in storage in Hungry Horse Reservoir

^(*) Preliminary data furnished by U. S. Geological Survey, subject to correction



	Seasor	nal Stream	m-Flow in T	Chousands	of Acre H	reet
UPPER COLUMBIA RIVER	FORECAST	%	FORE-			lo-Yr.
IN MONTANA	RUNOFF	10-Yr	CAST	Measured		Avg.
		AVG.	PERIOD	1953	1952	1943-52
MIDDLEFORK FLATHEAD						
RIVER	7-2/-2	07		00/5	7/00	7.07.
West Glacier (near)	1565	86	Apr-Sept		1682	1817
	<u>1436</u>	85	Apr-July	1926	1575	1686
	1246	86	Apr-June	1581	1408	1442
SOUTHFORK FLATHEAD						
RIVER						
Columbia Falls(near)	(17) 1850	82	Apr-Sept	2277	2067	2267
	1757	82	Apr-July	2172	1980	2147
	1565	83	Apr-June	1846	1824	1879
SWAN RIVER	,					
Big Fork (near)	620	96	Apr-Sept	604	619	644
	551	97	Apr-July	534	556	570
	459	99	Apr-June	416	481	466

⁽¹⁷⁾ Observed flow plus change in storage in Hungry Horse Reservoir (*) Preliminary data furnished by U. S. Geological Survey, subject to correction





INDEX TO MONTANA & NORTHERN WYOMING SNOW COURSES

			Loc	etion							ton	etion				
Drainage Basin and Course Hame	Montana Number	Elev.	Sec. Lat.	Trip.	Range Long.	Record Began	Hoesuring Oetes	By: 0	Dreinage Baein and Course Name	Montana Number	Sec.	tion Trp.	Range Long.	Record Began	Meesuring Detes	Measured Bys b
JEFFERSON RIVER		ssou				NAGE				SSOURI			INAGE	CON		
(ROCK-SEAVERHEAD)								(POPO AGIE RIVER)							
Lakeview Ridge Lakeview Canyon Linekiln	11度。	7400 6930 6950	27 26 5	1148 1148 158	2W 2W 9W	1948 1948 1948	3,4,5, 3,4,5 3,4	9 9 1	Blue Ridge Grannier Keedows Larsen Creek	862 864 976	9500 23 9000 19 9000 12	31n 30n 30n	101W 100W 103W	1939 1936 1948	2,3,4,5 2,3,4,5 3,4,5	12 12 12
White Pine Ridge	1281	8850	18	عبلة	9¥	1949	3,4	ī	Sewmill Glede South Pess	861 863	8500 3 9000 13	31N 30N	101W 101W	1939 1939	2,3,4,5	12
(HORSE PRAIRIE) Bloody Dick	13010	7600	12	88	16W	1948	3,4	1	(BIG HORN RIVER)	Wyoming						
Gold Stone Lenhi Pace	1309	8100 7480 6650	11 9 14	85 108 98	16W 15W 15W	1948 1948 1948	3,4 3,4	1 1	Beevers Mill	982	8900 6	43 N	102W	1948	2,3,4,5	12
Terrell Creek Trail Creek Selway Junction	13D12 13D1 13D11	7090 6800	15	10S 8S	15W 15W	1948 1948	3,4 3,4 3,4	1 1	Owl Creek Tensleep R.S. Timber Creek	8F1 7E7 9E2	8700 36 8300 30 8800 25	43 n 49 n 47 n	101W 86W 103W	1948 1935 1948	2,3,4,5 4,5 4,5	12 1 12
(BIO ROLE)									Ranger Creek Wood River	7EL 9F1	8800 32 8000 28	531 46N	88M 103W	1935 1939	2,3,4,5	12
Big Hole Pees Big Hole Pase-Below	1303	7400 6900	28 24	3S 3S	18W 18W	1948 1948	3,4 3,4	1		Wyoming						
East Soundary Gibbone Pase Jahnke Creek	1305 1302 1303	6700 7100	22 1 25	35 25 75	17W 19W 16W	1948 1934 1948	3,4 1,2,3,4,5	1,2	Faet Entrance Sylvan Pase	1086 1025	7000 17 7100 12	52N 52N	110W	1948 1936	1,2,3,4,5	5 5
Miner Forks	1306 1307	7340 7300 6720	24 10	65 68	17W 16W	1948 1945	3,4 3,4 3,4,5	i	`	yoming						
(WISE RIVER)									Big Goose Burgese Ranger Ste. Dome Lake	7E2 7E1 7E3	7700 4 7900 36 8800 11	53N 56N 53N	86w 89w 87 w	1945 1950 1950	2,3,4,5 2,3,4,5 2,3,4,5	1 12
Elk Horn	1301li 13015	7000 8450	13 15	3S 48	12W 12W	1948 1934	3,4,5	1 2	Lodgepole	9E1	8200 32	55N	106W	1940	4.5	12
Wice River (RUDY RIVER)	13013	6300	15	28	124	1948	3,4	1	POMDER RIVER	789	8500 5	47N	85¥	1951	2,3,4,5	12
Cottonwood	1122	5900	24	105	3W	1948	3,4	1	Muddy Pace Soldier Park	788 785	9700 11 8700 36	1.8N 51H	85W 85W	1950 1950	2,3,4,5	1 12
Plashlight	11g1 1203 1202	8400 6950 6900	30 22 13	10s 8s 4s	24 74 LVI	1948 1945 1948	3,4,5 3,4,5 3,4	1 1 1	Sour Dough	786	8500 17	49N	8FA	1936	2,3,4,5	1
Vigilante	1101	6125	28	98	3W	1948	3,14	ī								
	1125	6550	22	11s	38	1934	1,2,3,4,5	2		COLUI	MBIA RI	VER	BASIN			
West Yellowstons	11E7 10E2	6700 7500	7ti 2ti	138	5B 110°-42°	1934 1935	1,2,3,4,5 3,4	2 5,6	ROOTENAI RIVER	1581	6000 1	25N	3339	1937	4,5,5	1
OALLATIN RIVER	1	03.00			(=	1025	0.21.5		Blue Bird Basin Red Mountain	1441 1541	6800 24 6000 4 5450 8	37N 36N	26W 29W 2LW	1937 1937 1955	4,5,5 <u>1</u> 3,4,5,5 <u>1</u> 4,5,5 <u>1</u>	1 1 1
Devil's Slide Hood Meadow Mystic Lako	1004 1003 1002	8100 6600 6600	1կ 22 30	58 45 38	6B 6B 7B	1935 1934 1935	2,3,4,5 2,3,4,5 2,3,4	2,6 2,6 6,7	Weasel Divide	1447	5450 8	37N	24	1999	4,5,52	•
New World 21-Mile	10D1 11F6	6700 7150	24 1	38 115	6E 5E	1939 1934	1,2,3,4,5	6,7	Sasin Creek	13R1L	5000 11	19N	12W	1951	2,3,4,5	1
MISSOURI RIVER MAIR	STEM								Big Creek Brush Creek Cattle Queen	13B3 1liAli 13A1	6750 6&7 5000 13 4700 7	22N 30N 35N	18W 26W 17W	1961 1937 1939	3,4,5 3,4,5 3,4,5	4 1 5
Crystel Lake	1205 901 1002	6200 6100 7000	2 19 19	8 N 12N 9 N	5W 18E 8E	1936 1941 1938	1,2,3,4,5	2 1 12	Desert Mountain Hell Roaring Divide	13A2 11a3	5600 24 5770 35	31.N 32N	19W 22W	1937 1942	1,2,3,4,5	1
Kioge Bill	1001 1206	7950 6500	35 10	13N 5N	7E 6#	1937 1940	3,4,5 2,3,4	1,12 2 3	Holbrook Kishenehn Kiehenehn #3	13B13 1442 1446	4530 18 4300 7 4000 14	21N 37N 37N	13W 21W 22W	1951 1966 1954	1,2,3,4,5 4,5 4,5	5 5
Stemple Pees	1201 1201	7200 6900 6250	11 16 13	17 13 H 8 N	7भ 7म 6म	1938	2,3,4,5	12 2 2	Logan Creek Marias Pass	1445 1345	1300 31 5250 31 7000 23	30N 30N 25H	71/A 71/A 51/A	1937 1934 1948	3,4,5 1,2,3,4,5	2
Ten Mile Cr., Lower Ten Mile Cr., Middle Teo Mile Cr., Upper	1203	6800 8000	13	8N 8N	6म 5म	1935 1934 1935	1,2,3,4,5 1,2,3,4,5 1,2,3,4,5	2 2	Spotted Bear Mt. Strawberry Lake Trinkus Lake	13B2 13A10 13B1	6500 11 6500 9	28n 25n	19W 17W	1948 1948	3,4,5 3,4,5 3,4,5	i
(TOTOH RIVER)									Trout Lake #2 Upper Holland Lake Twin Creeks	13A12 13B5 13R11	3600 21 7000 28 3580 14	28N 20N 26N	17W 16W 16W	1948 1948 1951	3,4,5 3,4,5 3,4,5 2,3,4,5	1 1 1
Waldron Creek	12A1 12B2	6000 5600	13	26N 25H	10W 9W	1948 1948	3,4 3,4	1,12	Quintonkon Coyote Hill	13A13 13910	3800 11 4200 12	26N 18N	17W 16W	1951 1952	2,3,4,5 1,2,3,4,5	1
West Fork (SUN RIVER)	12B1	6000	6	25N	9₩	1948	3,4	1,12	Kl Dorado Mine Oold Creek Lake Intergaard	1309 1308 1304	7800 23 7200 14 6450 6	8n 8n 5n	12W 12W 13₩	1946 1946 1939	և և 2,3,և	12 12 3
Penchwark	12B8 12B6	5500 5400	9 33	20N 23N	10W 10W	1948 1949	3,4	1	Lubrecht Forest # 6 North Fork Jocko Picnic Orounde	1308 1387 1206	5400 31 6330 3 6500 10	11n 17n 5H	15W 17W 6W	1951 1941 1940	1,2,3,4,5 3,4,5	13
5-Bull Gates Park	12B9 12B5	5600 5300	36 31	20M 21/M	10W	1948 1949	3,4	1	Pipestone Pase Slide Rock Mountain	12D1 13C2	7200 11 7100 26	1N 1ON	7W 16W	1938 1937	2,3,4,5 4	3 1 1,12
Wrong Ridge	12B7 12B3 12B4	7000 6800 5700	20 17 32	22N 25N 25N	10W 10W 10W	1934 1949 1949	3,4 3,4 3,4	2	Stemple Pass Storm Lake No. 2	1305 1301 1307	6500 8 6900 16 7780 19	5N 13N	13₩ 7₩ 1₹⊌	1939 1934 1939	2,3,4 3,4,5 2,3,4	3 2
Wrong Creek (MARIAS RIVER)	1204	3100	۶٤	2)14	10#	2,4,	,,,	•	Stuart Mill Stuart Mountain	1306 1301	6500 19 7400 6	SN 14N	13W 18W	1939 1936	2,3,4	1,12
	13A5	5250	34	30N	П'A	1936	1,2,3,4,5	2	PEND OREILLE RIVER							
(MILE RIVER)	0.1	race	10	20.	14.	10/3	3 1.		Baree Hountain Freeseout Summit #2	1381 15810	6000 1 6800 21	25N 15N	31W 27W	1937 1951	4,5,5 1 4,5 4,5	1
Rocky Boy (MUSSELSHELL RIVE	9al (R)	5200	15	28N	168	1961	3,4	7	Hoodoo Creek BITTERROOT RIVER	1501	6200 9416	TIN	27W	1937	4,>	1
	1003	7000	19	9N	8B	1938	3,4	1,12	East Fork Ranger Sta. Oibbons Pase	1301	5400 16 7100 4	2N 2S	17W - 19W	1937 1934	4 1,2,3,4,5	1,12
(UPPER TELLOWSTON		200		0.5	100	1000			Hud Creek Pasture Hes Perce Camp	1402 1402	1500 24 5580 19420	11N 15	21/W 23W	1937 1937	3,4,5	-1,12 1 1,12
Canyon	9D1 10E3 10D7	7890 7750 7400	25 المار°-المار 25	85 1: 95	18E 100-30:	1937 1938 1937	4, 1,2,3,4,5 1,2,3,4,5	1,12 12	Nes Perce Paes Skalkaho Summit	1303	6575 32 7259 30	28H 6N	168 17W	1937 1937	3,4,5 4	1,12
Crevice Mt. Independence	1005	8400 8000	22	95 75	9E 12E	1935 1941	3,4 3,4	5 1 12								
	10E1	7850 7300	所。-27· 所。-37·	1	10°-24° 10°-37°	1937 1938	1,2,3,4,5 1,2,3,4,5	12 5	_	ACVAT	*115/0/4 * *	D.11.	rn n.	CIN		
(SHIELDS RIVER)	1002	6500	10	l, w	1000	1020	3.1	,	ST. MARY RIVER	45KA1(CHEWAN	KIV	EK BA	SIN		
LOWER YELLOWSTONE	1003	0500	10	Ш	108	1938	3,4	1	Iceberg Lake	13.43	6000 48°-50	, ,	130-421	1922	5	2,8
(WIND RIVER) Wyo	ming								Piegen Pess #6 Piegen Pess #6 Mount Allen #7	13Ali 13A6 13A7	5000 48°-46 6500 48°-45	']	13°-40' 13°-42' 13°-40'	1922 1922 1922	5 5 5	2,8 2,8 2,8
Burroughs Greek	10F8 9FL	9200 8800	23 15	LiLIN Li3N	110M 107M	1939 1948	2,3,4,5	12 12	Ptarmigan #8	1348	5800 480-50		130-421	1922	ś	2,8
Oinwoodie Ory Creek DuNoir	9710 979 976	9500 8750	21 34 27	39N Ian Ian	105W 6W 108W	1948 1948 1940	2,3,4,5 2,3,4,5 2,3,4,5	12 12 12	e. Numerels 1,2,3,4	and 5 ref	er to Januer	y 1, Fe	bruary 1,	March 1,	April I, and	isay 1.
Geyser Creek Hobbs Perk	9F7 9G3	8500 10000	12 22	41N 2S	108W 3W	1948 1949	2,3,4,5	12 12	b. Numerels refer to		hat secures					
Little Werm Mosquito Perk R,S. Sheridan R.S.	978 964 975	9500 9500 7500	24, 23	41N 2S 42N	108W 3W 109W	1948 1940 1939	2,3,4,5 2,3,4,5 2,3,4,5	12 12 12	1. U.S. Forest Services 2. U.S. Geologicel 3. Montane Power Co	Survey				on Weter	un - & Power Bure Wildlife Serv	
St. Lawrence R.S. T-Cross Ranch	9711 973	9000 8000	26 1	IN L3N	LM 107#	0با19 مباور	2,3,4,5	12 12	4. U.S. Indian Services. Netional Perk Se	rice		10	U.S. B. L. Deer L	oreeu of	Reclamation isees Committee	
Trout Greek Togwotee Pess	902 10P9	9600 8700	5 29	147M 52	2W 110W	1948 1936	2,3,4,5	12 10	6. Ecutane Experime	nt Statio		12	. Montan	Stete	ion Service Porestry Soho	
													8580		5,R-11,48	4-¥

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

Summary of snow survey data by tributary Watersheds April 1, 1955

	No. of	No.			quivalent 19				
TRIBUTARY BASINS	Courses Averaged	Years Record	expres	1953	per cent of AVERAGE				
MISSOURI R	VER BASTN	TN MON'	ΓΔΝΔ		1				
	DROIN	110 11010	LAIVA						
JEFFERSON RIVER									
Rock-Beaverhead Horse Prairie	4 6	7 7	77	65 63	63				
Big Hole	7	7 - 16	74 82	72	64 78				
Wise River	7 3	7-16	96	96	98				
MADISON RIVER	14	16-19	80	90	88				
GALLATIN RIVER	5	16-25	97	104	97				
MISSOURI MAIN STEM	10	14-19	85	99	94				
Teton River Sun River	3	7	66	85	83				
Marias River	1	19	65	111	102				
Milk River Musselshell River	1 1	13 17	88 76	117 118	100 96				
UPPER YELLOWSTONE (MONTANA) Shields River									
LOWER YELLOWSTONE (WYOMING)	9	8-25	76	92	92				
Clark Fork River Shoshone River Wind River Popo Agie River Owl Creek Greybull River Tongue River Shell Creek Norwood Creek Clear Creek (Powder River) Crazy Woman Cr. (Powder River)									
COLUMBIA RI	VER BASIN	IN MONT	ANA						
KOOTENAI RIVER ABOVE LIBBY, MONT. FLATHEAD RIVER UPPER CLARK FORK BITTERROOT RIVER PEND OREILLE	16 21 21 4 4	4-20 4-19 9-19 6-18 16-18	68 72 81 106 71	112 100 93 116 91	99 86 95 127 104				

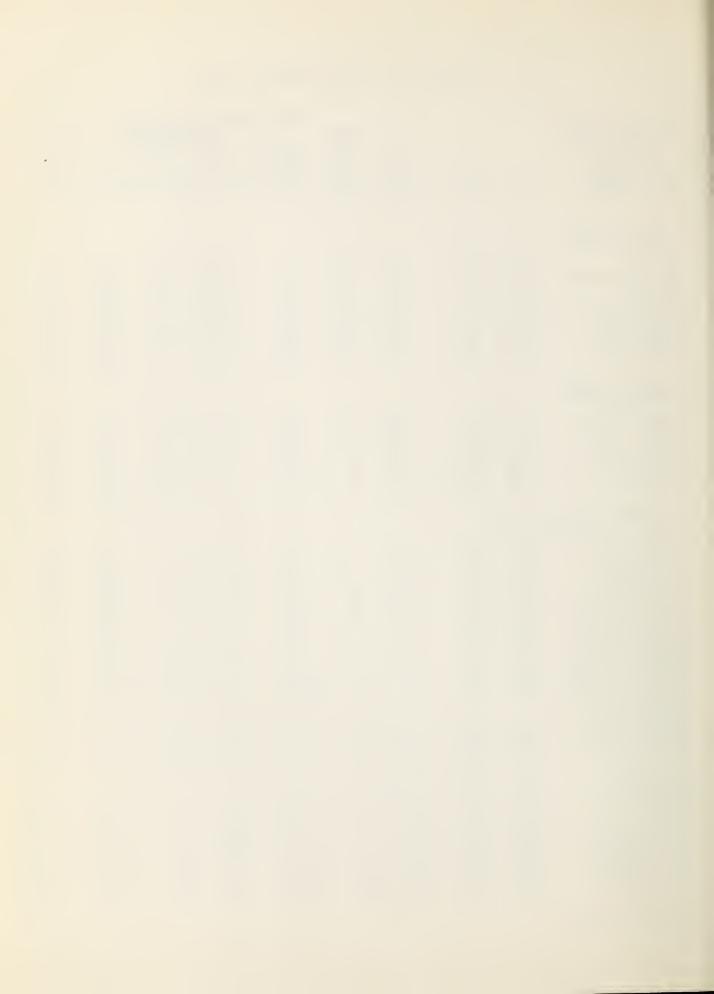


			SNOW COVER MEASUREMENTS							
MISSOURI BASIN				1955			ast Re			
DRAINAGE BASIN			Date	Snow	Water	Wat	er Con	tent (In.)	Y R e e	
AND SNOW COURSE	No.	Elev.	of Survey	(In.)	Content (In.)	1954	1953	Average .	a c r o s d	
JEFFERSON RIVER										
(Rock-Beaverhead) Lakeview Ridge Lakeview Canyon Limekiln White Pine Rdg *Kilgore *Camp Creek *Blue Ldg Mine	11E3 11E4 12E2 12E1 11E12 12E3 11E11	6800	3/31 3/31 3/15 3/15 3/28	32 35 9 22 30	7.6 4.9 1.5 5.2	8.5 8.7 1.0 6.8 8.3 10.0	9.8 10.4 2.4 7.0 7.2 10.6 15.2	9.9	7 7 7 7 18 19	
(Horse Prairie) Bloody Dick Gold Stone Lemhi Pass Terrell Creek Trail Creek Selway Junction (Big Hole)	13D10 13D9 13E1 13D12 13E2 13D11	8100 7400 6650 7090	3/18 3/18 3/16 3/16 3/16 3/16	31 40 26 16 28 25	7.6 10.8 6.9 3.0 7.1 5.8	11.2 14.4 7.6 4.6 9.0 9.2	14.2 19.0 8.2 5.1 8.1 11.0	10.3 4.9	7 7 7 7 7 7	
Big Hole Pass Big Hole Pass(Bl East Boundary Gibbons Pass Jahnke Creek Miner Forks Miner Lake *Moose Creek	13D3)13D4 13D5 13D2 13D8 13D6 13D7 13D16	7440 6900 6700 7100 7340 7300 6720 6200	3/21 3/21 3/21 3/31 3/18 3/19 3/19 3/31	47 45 28 64 30 38 28 50	12.9 13.3 7.4 21.4 8.0 10.6 7.5 14.9	18.7 13.6 7.2 24.6 12.2 13.6 9.8 17.3	19.3 16.5 10.3 28.0 14.4 14.4 9.6 22.6	20.0 16.0 9.7 23.8 12.6 13.6 8.8 16.4	7 7 7 16 7 7 10	
(Wise River) Anderson Meadow Elk Horn Wise River	13D14 13D15 13D13	8450	3/22 3/25 3/22	31 36 22	8.3 8.8 7.0	8.0 11.2 5.8	8.6 10.5 6.0	9.1 9.6 5.9	7 16 7	
(Ruby River) Cottonwood Cottonwood (Up) Flashlight Tobacco Root Vigilante	11E2 11E1 12D3 12D2 11D1	5900 8400 6950 6900 6125	4/5	38	8.1	9.1 9.4 7.8 7.3 1.5	 7.4 11.7 0.0	10.3 11.1 6.0 11.2 1.2	6 6 10 7 7	

^{*}Adjacent Basin



					CHOTT CO	ייים א כוייונדע		entuc	
MISSOURI BASIN			-	1955	SNOW CO		st Reco		VR
DRAINAGE BASIN			Date	Snow	Water			ent (In.)	e e
AND			of	Depth		i			Y ears
SNOW COURSE	No.	Elev.	Survey	(In.)	(In.)	1954	1953	Average	s d
						,			
MADISON RIVER									
PROTOGN ICT VERC									
Hebgen	11 E 5	6550	4/1	33	9.5	12.0	12.2	12.5	19
W. Yellowstone	llE7	6700	4/1	37	10.7	12.8	10.9	11.7	18
21-Mile	11E6	7150	4/1	48	15.2	19.6	16.8	17.3	18
*Big Springs *Island Park	llE9	6500 3600	3/28 3/29	61 52	21.9 16.2	24.7 16.8	21.7 16.2	21.6 16.3	19 19
*Valley View	llE8	6500	3/28	44	13.2	15.4		15.5	19
Norris Basin	10E2	7500	4/1	35	9.5	11.6	1)•0	9.5	16
			"					• •	
GALLATIN RIVER									
Devil's Slide	1004	8100	3/28	58	18.6	20.0	18.8	20.2	16
Hood Meadow	10D3	6600	3/28	32	8.8	8.8	7.6	8.7	16
Mystic Lake	10D2	6600	4/2	30	8.8	7.2	6.6	7.6	25
New World	lopl	6700	4/2	36	11.2	8.8	9.8	10.1	16
21-Mile	11E6	7150	7/1,	48	15.2	19.6	16.8	17.3	18
MISSOURI RIVER MA	AIN STE	M							
Chessman Res.	1205	6200	3/30	23	5.8	4.8	4.5	4.8	19
Crystal Lake	9C1	6100	4/1	29	9.4	14.2	10.2	12.4	14
Grasshopper	1002	7000	4/1	23	5.2	6.8	4.4	5.4	17
Kings Hill	1001	7950	3/30	42	11.6	14.0	11.6	13.4	16
Picnic Grounds	1306	6500	4/1	16	4.1	5.2		4.5 5.8	9
Pipestone Pass Stemple Pass	12D1 12C1	7200 6900	4/2 3/31	33 36	6.0 9.2	4.9 13.2	6.3	10.0	16 16
Tenmile, Lower	1201	6250	3/31 4/1	27	7.0	7.6	6.6	6.6	19
Tenmile, Middle	1203	6800	4/1	37	10.1	11.0	11.6	10.6	19
Tenmile, Upper	12C4	8000	4/1	43	12.7	13.5	14.0	13.4	19
(Teton River)					1				
Fright Creek	12A1	6000	3/27	45	12.6	25.3		20.1	7
Waldron Creek West Fork	12B2 12B1	5600 6000	3/26 3/26	31 56	8.0 20.2	12.0 24.8	6.2	8.7 20.6	7 7
(Sun River)	TCDT	0000	5/ 20	90	20.2	24.0	20.0	20.0	(
Benchmark	12B8	5500	3/28	37	11.8	17.5	7.5	11.8	7
Cabin Creek	12B6	5400	4/1	24	7.8	11.9	5.8	8.3	6
5-Bull	12B9	5600	3/28	30	7.9	13.0	5.2	9.1	7
Gates Park	12B5	5300	4/1	33	8.4	19.0	8.7	12.8	6
Goat Mountain	12B7	7000 6800	3/31	40	11.3	17.9		10.8 25.4	16 6
Wrong Ridge Wrong Creek	12B3 12B4	5700	4/1 4/1	54 44	18.6 14.3	33.0 25.4	20.8	17.6	6
		7,00	4/ 4	44	-u•)	-244		-,00	



					SNOW CO	VER ME	VER MEASUREMENTS					
MISSOURI BASIN DRAINAGE BASIN			Date	1955 Snow	Water	Mate		st Record tent (In.)	Y R le e			
AND			of		Content		1	00110 (111.)	ecor ecor			
SNOW COURSE	No.	Elev.	Survey	(In.)	(In.)	1954	1953	Average	s đ			
MISSOURI RIVER MA	IN STE	M (Cont	'd)									
(Marias River) Marias Pass	13A5	5250	3/31	55	18.6	28.6	16.	8 18.2	19			
(Milk River)			-, -		•							
Rocky Boy	9Al	5200	4/1	21	5.4	6.2	4.0	5.4	13			
(Musselshell) Grasshopper	1002	7000	4/1	23	5.2	6.8	4.	4 5.4	17			
UPPER YELLOWSTONE												
Camp Senia Canyon Cooke City Crevice Mt. Independence	9D1 10E3 10D7 10D5 10D6	7890 7750 7400 8400 8000	3/27 3/31 3/31 4/2	21 52 28 28	5.0 14.1 6.7 6.7	7.5 17.8 10.9 9.8 19.4	14. 14. 8. 9.	3 16.9 8 8.1 2 10.0	17 11 18 20 13			
Lake Camp Lodgepole, Wyo. Lupine *Lewis Lake Div. *Astor Creek *Tom Thumb Summit	10E4 9E1 10E1 10E9 10E8 10E7	7850 8200 7300 7000 7700 7900	4/1 3/30 3/31 3/29 3/29 3/29	36 34 44 106 92 66	8.8 10.4 12.2 38.7 30.6 20.8	12.4 12.7 13.1 52.3 38.0 28.0	9.1 10.2 9.1 45.2 21.2	10.9 1 11.0 3 10.4 1 41.6 0 30.9	17 17 16 25 25			
(Shields River) Porcupine	1003	6500	4/1	25	6.0	7.8	8.:	2 6.5	16			



			SNOW COVER MEASUREMENTS						
MISSOURI BASIN DRAINAGE BASIN		-	D-+-	1955	7 7 - 4	77.1		st Record	Y R
AND			Date of	Snow Depth	Water Content	Wate	er Con	tent (In.)	lac
SNOW COURSE	No.	Elev.	Survey	(In.)	(In.)	1954	1953	Average	rord
LOWER YELLOWSTONE above Diver									
Brooks Lake #3 Burroughs Creek Du Noir Geyser Creek Little Warm Sheridan T-Cross Ranch *Togwotee Pass	10F8 9F4 9F6 9F7 9F8 9F5 9F3 10F9	9200 8800 8750 8500 9500 7500 8000 9600	3/24 3/26 3/25 3/25 3/25 3/24 3/26 3/30	74 37 28 28 54 32 24 83	22.1 9.7 7.7 7.6 14.4 8.7 5.9 27.7	28.5 16.5 9.9 9.9 20.1 11.4 9.5 34.7	28.1 14.8 8.2 7.5 18.7 7.0 27.3	3 17.4 2 10.0 5 10.2 7 21.9 7 7.5 7 7.5	19 6 14 6 6 19 14 19
Dinwoodie Dry Creek Hobbs Park Mosquito Park St. Lawrence Trout Creek POPO AGIE RIVER	9F9	10000 9500 10000 9500 9000 8400	3/29 3/29 4/2 4/2 3/31 4/2	37 19 48 24 23 18	10.5 4.7 15.1 7.7 6.6 5.8	13.9 7.6 23.7 12.3 9.0 10.3	12.7 6.2 14.2 6.8 5.9 7.1	2 8.3 2 22.1 3 9.7 8 8.1	5 6 10 11 6
Blue Ridge Grannier Meadows *Larson Creek Sawmill Glade South Pass *Dutch Joe	8G2 8G4 9G6 8G1 8G3 9G5	9500 9000 9000 8500 9000 8700	4/1 4/1 3/26 4/1 4/1 3/26	39 47 30 26 48 40	12.4 14.4 5.4 7.9 14.6 8.1	17.4 20.8 10.4 11.0 21.8 11.9	10.1 12.1 6.5 8.1 12.3	15.5 13.3 8.3 14.9	15 18 5 15 15 16



MISSOURI BASIN		1		1955	SNOW CO		ASUREM ast Re		Y R
DRAINAGE BASIN			Date	Snow	Water			nt (In.)	i e e
AND SNOW COURSE	No.	Elev.	ρf Survey	Depth (In.)	Content (In.)	1954	1953	Average	e a c o r d
BIG HORN RIVER	- WYOMIN	ī <u>G</u>							
Beavers Mill Owl Creek	9F2 8F1	8900 8700					6.3 4.7	7.8 6.3	5 5
Timber Creek Wood River	9E2 9El	8800 8000	4/2 4/1	14 16	3.5 4.1	6.9 7.3	4.3	6.0 5.5	6 15
Tensleep R. S. Ranger Creek	7E7 7E4	8200 8800	4/1	34	6.8	5.5 8.8	6.9 7.8	7.0 8.2	18 17
SHOSHONE RIVER									
East Entrance Sylvan Pass	10E6 10E5	7000 7100	3/29 3/29	35 41	9.8 11.3	13.4 15.0	8.9 13.5	13.3 14.5	6 17
TONGUE RIVER									
Burgess Jct. Big Goose Dome Lake	7E1 7E2 7E3	7900 7700 9000				20.0 5.5 11.0	13.6 4.3 7.2	14.8 4.4 7.8	5 19 4
POWDER RIVER									
Sour Dough North Powder Soldier Park	7 E 6 7E9 7E5	8500 8500 8700	3/30	35	7.7	9.0 7.0 5.1	4.6 5.8 2.6	6.1 7.5 4.6	18 4 5
Muddy Pass	7 E 8	9700	3/29	36	8.0	9.4	8.0	8.8	5



			SNOW COVER MEASUREMENTS						
COLUMBIA BASIN		-	Dete	1955	Y.T.,		ast Re		YR
DRAINAGE BASIN AND			Date of	Snow Depth	Water Content	1954	1953	nt (In.) Average	ecord
SNOW COURSE	No.	Elev.	Survey	(In.)	(In.)				å
KOOTENAI RIVER (above I Monta								
Baree Mt. Brush Creek Fernie New Fernie Ferguson Kimberley Marble Canyon Nelson Creek Red Mt. Sinclair Pass Smith Creek Sulllvan Mine Upper Elk Riv Gerrard Gray Creek Sandon Blue Bird Weasel Divide	15Bl lluAlu Can Can Can Can Can Can 15Al Can 16Al Can Can Can Can Can Can LluAl LluA7	6000 5000 3500 4100 3000 3800 5000 3050 6000 4500 4400 5100 5100 3500 6800 5450	4/1 3/29 3/31 3/31 3/31 3/31 3/31 4/1 4/1 4/2 3/28 3/28 3/28	102 42 36 50 49 25 47 48 50 21 111 50 30 71 58 40 88 83	41.0 14.2 11.1 16.3 19.8 6.2 12.1 15.1 15.9 4.9 44.3 10.5 8.4 21.9 18.5 12.1 33.9 29.1	60.3 19.1 16.4 23.8 29.2 12.1 19.0 23.0 26.8 10.3 62.0 19.3 11.0 20.8 22.5 18.9 54.0		17.2 20.0 5.8 15.3 14.5 19.0 5.2 43.9 16.3 8.8 14.6 20.8	16 10 17 4 17 17 18 16 18 16 9 7 20 7 17 16
FLATHEAD RIVER									
Blue Bird Basin Creek Big Creek Brush Creek Cattle Queen Coyote Hill Desert Mountain Goat Mountain Hell Roaring Div Holbrook Kishenehn Kishenehn Kishenehn #3 Logan Creek Marias Pass N. Fork Jocko Quintonkon Spotted Bear Mt. Strawberry Lake Trinkus Lake Trout Lake Twin Creeks Upper Holland	14A1 13B14 13B3 14A4 13A1 13B10 13A2 12B7 14A3 13B13 14A2 14A6 14A5 13A5 13B7 13A13 13B2 13A10 13B1 13A12 13B1 13B1	6800 5000 6750 5000 4700 4200 5600 7000 4530 4300 4300 4300 5250 6330 3800 7000 6500 3600 3580 7000	3/28 3/29 4/2 3/29 4/1 3/30 4/4 3/29 3/26 3/26 4/3 3/31 4/2 3/31 4/2 3/31 3/31 4/1 3/30 3/30 3/31	88 32 94 42 75 35 40 40 30 36 31 55 108 44 100 90 54 38 86	33.9 9.0 36.5 14.2 26.8 11.0 14.8 11.3 11.7 6.7 10.0 9.0 18.6 40.8 16.0 14.0 37.5 31.2 17.0 12.0 30.1	54.0 16.0 13.1 19.1 49.8 13.2 18.3 17.9 37.9 17.3 15.2 11.8 28.6 49.0 16.6 16.8 37.8 37.9 18.9 12.5 39.2	33.2 11.7 13.5 10.4 29.2 6.9 6.0 6.3 16.8 42.7 11.1 10.2 33.1	10.8 40.9 12.6 31.8 11.5 15.5 10.8 30.5	16 14 10 16 16 16 13 14 16 19 14 77 77 74 6



COLUMBIA BASIN				1955	SNOW CO	VER MEASUREMENTS Past Record Y R			
DRAINAGE BASIN			Date	Snow	Water			nt (In.)	Y R e e a c or d
AND			of		Content	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		(2)	ro
SNOW COURSE N	10.	Elev.	Survey	(In.)	(In.)	1954	1953	Average	q I.
UPPER CLARK FORK									
Chessman Res. East Fork R.S. Fish Lake, Idaho Intergaard Lubrecht Forest#6 North Fork Jocko Picnic Grounds Pipestone Pass Skalkaho Summit Slide Rock Mt. Southern Cross Stemple Pass Storm Lake #2 Stuart Mill Stuart Mt. #1 Tenmile, Lower Tenmile, Middle Tenmile, Upper *49-Meadows *Lookout	3B10 .2C5 .3D1 .5C2 .3C4 .3C8 .3B7 .2C6 .2D1 .3C3 .3C2 .3C7 .3C7 .3C6 .3C7 .3C7 .3C6 .3C1 .2C2 .2C4 .5B3 .5B2 .3C9	4200 6200 5400 5400 6450 5400 6500 7200 7258 7100 6500 6500 7400 6500 7400 6250 6800 5000 5250 7800	3/30 3/30 4/1 3/28 4/1 4/1 3/31 4/2 3/31 4/2 4/1 3/31 4/1 4/1 4/1 4/1 4/1 3/30	35 23 31 109 24 16 107 16 33 74 50 25 36 48 27 38 43 89 90 61	10.0 5.8 8.1 35.3 6.8 3.6 40.8 4.1 6.0 25.0 15.7 6.8 9.2 14.3 6.2 24.2 7.1 10.1 12.7 31.8 32.7 19.0	13.2 4.8 7.0 38.3 8.3 4.1 49.0 5.2 4.9 32.8 17.9 8.1 13.2 14.8 7.6 34.0 7.6 11.0 50.5	11.7 4.5 8.3 42.4 7.9 1.4 42.7 4.9 6.3 26.5 15.1 6.2 10.4 17.0 8.1 27.4 6.6 11.6 14.0 36.3 33.1	11.5 4.8 5.7 40.4 7.6 3.8 41.5 5.8 25.7 14.3 5.8 10.0 14.8 7.3 30.1 6.6 13.4 35.6 34.4 23.1	8 19 16 2 10 4 14 9 16 18 19 19 19 18 18 18 4
_	.3C8	7200	3/30	47	13.6			18.4	3
East Fork R.S. 1: Gibbons Pass 1: Nezperce Pass 1: Nezperce Camp 1: Skalkaho Summit 1: Stuart Mt. #1 1: *Moose Creek 1:31 *Kit Carson 1: *Savage Pass 1: *Powell Pasture 1:	303 301 D16 4D3 404 403	5400 7100 6575 5580 7259 7400 6200 4700 6000 3700 5700	4/1 3/31 4/3 4/3 3/31 3/28 3/31 4/3	31 64 52 48 74 68 50 39 80 39 70 121	8.1 21.4 17.3 16.0 25.0 24.2 14.9 11.2 26.1 15.8 25.3 43.5	7.0 24.6 19.4 14.6 32.8 34.0 17.3 8.4 30.9 17.7 38.5	15.8 26.5 27.4 22.6 8.2 30.3 15.2	30.1 16.4 9.6 26.0	16 18 18 16 18 18 6 17 16
PEND ORIELLE									
Freezeout Summit 151 Hoodoo Creek 15	B10 5C1	6000 7000 6200 4800	4/1 4/1 4/1 3/30	102 103 124 111	41.0 33.8 48.1 44.3	46.9 69.0	45.8 36.2 48.1 53.4	32.8 45.7	16 18 18 16
*Adjacent Basin									



STATUS OF RESERVOIR STORAGE APRIL 1, 1955

BASIN &	USEABLE	THOUSAND ACRE FEET IN STORAGE ABOUT APRIL FIRST 10-yr.avg							
STREAM	RESERVOIR	(M.A.F.)	1955	1954	1953	1943-52			
MISSOURI RIVER	BASIN	4		1	-				
Beaverhead Madison River Madison River Hyalite Creek Missouri River Missouri River Missouri River Missouri River Missouri River N.Fk.Sun River N.Fk.Sun River N.Fk.Sun River Birch Creek Dupuyer & Birch Judith River Missouri River Missouri River Milk River W.Rosebud Creek Red Lodge Creek Tongue River Swiftcurrent Cree	Ackley Lake Fort Peck 1 Fresno Nelson Mystic Lake	10.45 81.92 105.00 32.30 32.00 30.00 112.00 5.82 9,000.00 127.20 66.80 20.80 27.50 73.90	182.6 38.0 1,177.0 63.8 10.9 77.2 69.0 25.3 19.2 29.1 95.8 4.6 9,326.0 76.2 47.5 3.9	32.5 196.7 34.0 4.8 437.0 48.3 5.8 79.6 54.9 25.7 24.7 18.5 92.3 2.2 12,140.0 128.4 44.0 3.9 17.1	48.3 203.3 33.4 5.5 80.5 51.9 6.9 36.6 73.9 28.2 19.9 22.0 101.4 12,630.0 97.5 36.7 4.8 19.6 22.1 25.4	34.0 218.1 34.9 44.2 1/6.8 57.8 73.2 18.3 20.5 28.0 102.1 4.8 12,514.0 96.9 31.8 3.3 13.7 17.3 25.8			
MISSOURI RIVER	BASIN - WYOMING								
Shoshone River Wind River Wind River Bull Creek Belle Fourche	Buffalo Bill Boysen Pilot Butte Bull Lake Key Hole	440.00 758.00 31.6 152.00 190.00	133.8 268.7 26.4 62.2 15.0	147.8 382.0 17.7 69.3 8.6	154.8 495.0 23.5 56.0 13.8	263.9 152.4 16.4 56.4 1.3			
MISSOURI RIVER BASIN - NORTH DAKOTA									
Heart River Heart River	Heart Butte Dickerson	54.80 4.3	56.8 4.3	70.2 5.2	57.7 3.6	3/70.8 <u>4</u> / 5.6			
MISSOURI RIVER BASIN - SOUTH DAKOTA									
Belle Fourche Cheyenne River Cheyenne River Grand River	Angostura	185.00- 160.00 15.1 84.00	68.0 48.5 10.9 77.8	120.4 32.7 15.1 82.7	65.6 50.6 13.9 84.2	131.6 41.0 13.8			
1/7-yr. averag 3/5-yr. averag 4/4-yr. averag	e								



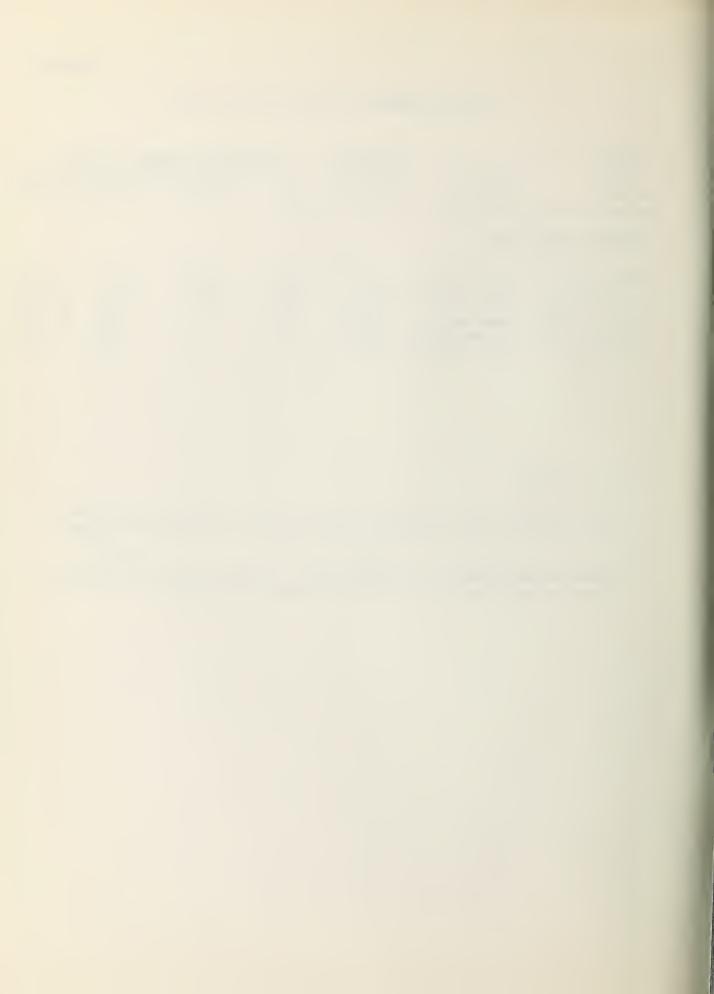
STATUS OF RESERVOIR STORAGE APRIL 1, 1955

BASIN & STREAM	RESERVOIR	USEABLE CAPACITY (M.A.F.)	THOU	SAND ACRE EE ABOUT APRI 1954	ET IN STO L FIRST 1953	
COLUMBIA RIVER	BASIN	<u> </u>			<u> </u>	
Flint Creek S.FkFlathead Flathead River Flathead River Flathead River Jocko Creek	Georgetown Lk Hungry Horse Flathead Lake Camas Res's Mission Valley Lower Jocko La	1,791.00 42.80 98.60	20.1 2,155.0 709.8 39.5 57.2	21.5 1,634.0 909.0 33.8 25.2	23.8 858.3 777.9 37.2 43.5	21.7 5/898.0 991.9 6/ 26.5 7/ 49.2

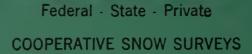
^{5/ 3-}yr. average

^{6/} Camas Reservoirs are shown as a sum of (4) small reservoirs on the west side of Flathead Lake located on Dry Creek and Little Bitterroot River.

^{7/} Mission Valley Reservoirs are shown as a sum of (8) small reservoirs located south and east of Flathead Lake. Both Camas and Mission Valley reservoirs are operated by the Indian Irrigation Service.







Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"